

SECTION 09900

PAINTING, GENERAL

1. REFERENCE PUBLICATIONS

1.1 Some of all of the publications referred to hereinafter form a part of this specification to the extent referenced. The publications are referred to in the text by the basic designation only. The latest edition of referenced publications shall govern.

1.2 Federal Specifications (Fed. Spec.):

TT-E-489	Enamel, Alkyd, Gloss, For exterior and Interior Surfaces.
TT-P-31D	Paint, Oil: Iron Oxide, Ready Mixed, Red and Brown.
TT-P-86G	Paint, Red-Lead-Base, Ready Mixed.
TT-P-102E	Paint, Oil, Alkyd Modified, Exterior, Whites and Tints.
TT-P-615	Primer Coating: Basic Lead Silico Chromate, Ready Mixed.
TT-P-636D	Primer Coating: Alkyd, For Wood and Ferrous Metals.
TT-P-664	Primer Coating: Alkyd, Corrosion Inhibiting, Lead and Chromate Free.

2. DEFINITION

2.1 The term "paint" as used herein, includes emulsions, enamels, paints, stains, varnishes, sealers, cement-emulsion filler, and other coatings, whether used as prime, intermediate, or finish coats.

3. PACKAGING, LABELING, AND STORAGE

3.1 Paints shall be in sealed containers that legibly show the designated name, formula or specification number, batch number, color quantity, date of manufacture, manufacturer's formulation number, manufacturer's directions including any warnings and special precautions, and name of manufacturer. Pigmented paints shall be furnished in containers not larger than five gallons. Paint shall not be stored on the project site. Emulsion paints shall be stored to prevent freezing.

4. COLORS AND TINTS

4.1 Colors and tints shall conform to Federal Standard 595 and shall match the respective colors of the material and/or equipment to be painted.

4.2 Color selection shall be made and verified by the COR prior to application by the Contractor.

5. QUALITY ASSURANCE PROVISIONS

5.1 Materials will be approved based on test reports furnished, except where samples are tested, approval will be based on tests of samples. If materials are approved based on test reports furnished, samples will be retained by the Government for testing should the materials appear defective during or after application. If the sample is tested by the Government and it fails to meet specification requirements, the material represented by the sample shall be replaced, and the cost of retesting will be deducted from the payments due the Contractor at the prevailing laboratory costs.

6. ENVIRONMENTAL CONDITIONS

6.1 Unless otherwise recommended by the paint manufacturer, the ambient temperature shall be between 45 and 95 degrees F. When applying coatings other than water-thinned, epoxy, and moisture cure polyurethane coatings. Water-thinned coatings will only be applied when ambient temperature is between 50 and 90 degrees F. Epoxy, moisture cure polyurethane, and liquid glaze coatings will only be applied within the minimum and maximum temperature recommended by the coating manufacturer. Paints, except water-thinned types, shall be applied only to surfaces that are completely free of surface moisture as determined by sight or touch. In no case shall paint be applied to surfaces upon which there is visible frost or ice.

7. MATERIALS

7.1 General: Materials shall conform to the requirements of the specifications listed herein.

8. HAZARDOUS MATERIALS RESTRICTIONS

8.1 Lead: Paint shall contain not more than 0.06 percent lead by weight (calculated as lead metal) in the total nonvolatile content of the paint, except lead-based metal primers as herein before specified, may be used.

8.2 Mercury: Mercurial fungicides shall not be used.

8.3 Material Disposal: All unused paint, solvent, empty or partial empty containers, and paint/solvent contaminated materials shall be removed from YPG at the expense of the contractor, and disposed of in accordance with applicable State and Federal regulations.

9. SURFACE PREPARATION

9.1 General: Items not to be painted which are in contact with or adjacent to painted surfaces shall be removed or protected prior to surface preparation and painting operations. Exposed ferrous metals, including nails on or in contact with surfaces to be painted with water-thinned paints, shall be spot-primed with zinc-dust, zinc dust-zinc oxide, zinc yellow-iron oxide, or zinc chromate primer. Surfaces to be painted shall be clean before applying paint or surface treatments. Oil and grease shall be removed with clean cloths and cleaning solvents prior to mechanical cleaning. Cleaning solvents shall be of low toxicity with a flashpoint in excess of 100/degrees/F. Cleaning shall be programmed so that dust and other contaminants will not fall on wet, newly painted surfaces.

9.2 Wood Surfaces: All surfaces shall be sanded smooth and adjacent edges feathered. All cracks, holes, knotholes or other surface defects shall be filled with an appropriate filler, sanded smooth and spot primed with the specified primer.

9.3 Ferrous Surfaces: Ferrous surfaces that have not been shop coated shall be solvent cleaned. Surfaces that contain loose rust, loose mill scale and other foreign substances shall be mechanically cleaned by power wire brushing or sandblasting. Minor amounts of residual rust, that cannot be removed except by thorough blast cleaning, and tight mill scale that cannot be removed by applying a sharp knife to any edge, will be allowed to remain. After cleaning, one coat of ferrous metal primer shall be applied to all ferrous surfaces to receive paint, other than those to receive asphalt emulsion coatings. Shop coated ferrous surfaces shall be protected from corrosion by treating and touching up corroded areas immediately upon detection.

9.4 Galvanized and Non-Ferrous Surfaces: Galvanized, aluminum and aluminum alloy, lead, copper and other non-ferrous surfaces to be painted shall be solvent cleaned.

10 EXISTING PAINTED SURFACES

10.1 Existing Painted Surfaces: Existing surfaces previously painted and specified to be repainted or surfaces damaged during construction shall be thoroughly cleaned of all existing paint, grease, dirt, dust or other foreign matter. Blistering, cracking, flaking and peeling or other deteriorated coatings shall be removed. Slick surfaces shall be roughened. Damaged areas such as but not limited to nail holes, cracks, chips, and spalls shall be repaired with suitable material to match adjacent undamaged areas. Edges of chipped paint shall be feather edged and sanded smooth. Rusty metal surfaces shall be cleaned to bare metal and primed using one coat of ferrous-metal primer. Solvent, mechanical, or chemical cleaning methods shall be used to provide surfaces suitable for repainting.

11. MIXING AND THINNING

11.1 General: Packaged paint may be thinned immediately prior to application where necessary to suit conditions of surface, temperature, weather, and method of application with not more than one pint of suitable thinner per gallon. The use of thinner shall not relieve the Contractor from obtaining complete hiding. Paints of different manufacturers shall not be mixed.

12. APPLICATION

12.1 General: Paint may be applied by brush, roller or spray application. At time of application, paint shall show no signs of deterioration. Uniform suspension of pigments shall be maintained during application. Paint shall be applied so finished surfaces shall be free from runs, drops, ridges, waves, laps, brush marks, and variations in color, texture, and finish. Hiding shall be complete. Each coat shall be applied as a film of uniform thickness. Rollers for applying paints and enamels shall be of a type designed for the coating to be applied and the surface to be coated. Special attention shall be given to insure that all surfaces including edges, corners, crevices, welds, and rivets receive a film thickness equivalent to that of adjacent painted surfaces.

12.1.1 Adequate ventilation shall be provided during paint application. Adjacent areas shall be protected by the use of drop cloths or other approved precautionary measures shall be taken. Paint shall be lightly sanded prior to application of each subsequent coat. Paints, except water-thinned types, shall be applied only to surfaces that are completely free of surface moisture as determined by sight or touch.

12.2 Coating Progress: Sufficient time shall elapse between successive coats to permit proper drying. This period shall be modified as necessary to suit adverse weather conditions. Oil base or oleoresinous solvent-type paints shall be considered dry for recoating when the paint feels firm, does not deform or feel sticky under moderate pressure of the thumb, and the application of another coat of paint does not cause lifting or loss of adhesion of the undercoat.

12.3 Metal Surfaces: First coats shall be applied by brush. The dry film thickness of the two coat system at any point shall not be less than 4.5 mils with the primer having a minimum dry film thickness of 1.2 mils.

12.4 Time Between Surface Preparation and Painting: Surfaces that have been cleaned, pretreated and otherwise prepared for painting shall be given a coat of the specified first coat as soon as practicable after such pretreatment has been completed, but prior to any deterioration of the prepared surface.

13. SURFACES TO BE PAINTED

13.1 Surfaces listed in paragraph 15 of this section, titled PAINTING SCHEDULE, will receive the surface preparation, paints, and number of coats prescribed in the schedule.

14. CLEANING

14.1 Cloths, cotton waste and other debris that might constitute a fire hazard shall be placed in closed metal containers and removed at the end of each day. Upon completion of the work, staging, scaffolding, and containers shall be removed from the site. Paint and other deposits upon adjacent surfaces shall be removed and the entire job left clean and acceptable. All empty and/or partially empty paint, chemical and/or solvent containers shall be disposed of in accordance with paragraph 9.3 of this section.

15. PAINTING SCHEDULE

15.1 The PAINTING SCHEDULE prescribes the surfaces to be painted, required surface preparation, and the number and types of coats of paint.

15.2 Shop-Painted Items: Surfaces of items finish-painted by the manufacturer, or specified to be finish-painted under other sections of the specifications, are inclusive of the requirements for surface preparation and painting. Shop-primed items shall receive surface preparation and finish painting as required by this section.

15.3 Surface Preparation: The statement "as previously specified" under column heading "Surface Preparation" of the PAINTING SCHEDULE refers to paragraph 10, titled SURFACE PREPARATION of this section of the specification.

15.4 PAINTING SCHEDULE

SURFACE COAT	SURFACE REPARATION	1ST COAT	2ND COAT
Wood Surfaces.	As previously specified for	TT-E-489	TT-E-489

surface type.

Ferrous
Surfaces.

As previously
specified for
surface type.

Primer
Coating

TT-P-102E

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